August 27, 2011

via US Mail and Email

KEATING
ENVIRONMENTAL
MANAGEMENT, INC.

835 Springdale Drive
Suite 200
Exton, PA 19341

610.594.2600 P
610.594.6100 F

keatingenvironmental.com

Mr. Scott Rice
United States Environmental Protection Agency
Waste and Chemicals Division
1060 Chapline Street
Suite 303
Wheeling, WV 26003-2995

Re: School District of Philadelphia
Transformer Compliance Project
George Washington High School
Transformer Replacement – Substation No. 2

KEM

KEATING
ENVIRONMENTAL
MANAGEMENT

Environmental, Energy & Sustainability Solutions

Dear Scott:

I hope that this letter finds you well and enjoying what remains of the summer!

Please accept this letter as a *formal* report regarding the removal of the PCB Transformer (Allis Chalmers, serial number 3338913) from Substation No. 2 at the George Washington High School.

The transformer was removed on July 13, 2012 without incident. The removal actions were completed in accordance with the contractor provided/School District reviewed Work Plan. The enclosed letter of July 31, 2012 from Keating Environmental to the School District of Philadelphia (1) describes the work that was performed and (2) provides the transportation manifests for the transformer, the PCB oil and debris.

Please contact me if you have any questions regarding the enclosed report. In addition, while you will receive a separate report, please be advised that the PCB Transformer from Substation No. 1 (Serial No. 3338914) was removed on Saturday, August 25, 2012, also without incident, in accordance with the Work Plan. Therefore, there are no longer any PCB transformers at the George Washington High School.

Regards,
KEATING ENVIRONMENTAL MANAGEMENT, INC.

Keith Choper, P.E., LEED-AP

Enclosure: July 31, 2012 Letter from Keating Environmental to the School District of Philadelphia re: PCB Transformer Removal

cc: Ms. Francine Locke
Mr. Jerry F. Junod
Project File 5385

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July 31, 2012
(file: 5385)

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Ms. Francine Locke, Director
Office of Environmental Management and Services
School District of Philadelphia
440 North Broad Street, 3rd Floor
Philadelphia, PA 19130

RE: PCB Transformer Removal
George Washington High School
10175 Bustleton Avenue
Philadelphia, Pennsylvania

KEM

KEATING
ENVIRONMENTAL
MANAGEMENT

Environmental, Energy & Sustainability Solutions

Dear Francine:

This letter documents the decommissioning and disposal of the PCB transformer from Substation 2 at the George Washington High School. The remaining PCB transformer is scheduled to be removed in conjunction with the ongoing school renovation project during August 2012.

Background

George Washington High School has been operating two PCB transformers under a Consent Decree with the United States Environmental Protection Agency (USEPA) since March 1997. These transformers were located in separate substations on the ground floor of the facility. Both units were manufactured by Allis Chambers and contained 4,445 pounds (approximately 350 gallons) of Chlorextol dielectric fluid. The individual transformers, identified by serial number and location are summarized below.

PCB Transformer Summary
George Washington High School

Transformer	Serial Number	Location
Transformer 1	3338914	Substation 1
Transformer 2	3338913	Substation 2

Transformer Removal

The transformer decommissioning was conducted in conjunction with a school renovation project that included the installation of two new, non-PCB transformers. In preparation for the renovation project, a technical specification was prepared by KEM describing the

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environmental requirements necessary for the removal and disposal of the transformers in accordance with the Consent Decree and applicable state and federal regulations.

The electrical construction contract for the George Washington High School renovation was awarded to C.A.D. Electric, Inc. (C.A.D.) located in Rose Valley, Pennsylvania. The removal and disposal of the PCB transformer equipment and dielectric fluid was subcontracted by C.A.D. to Ferrick Construction Company, Inc. (Ferrick), a Philadelphia-based environmental construction services company. Transportation and disposal services were provided by Clean Harbors Environmental Services (Clean Harbors) of Philadelphia.

KEM

In accordance with the technical specification, Ferrick prepared a Work Plan and schedule for the work associated with the removal of the PCB transformers. A project meeting was held to address elements of the Work Plan that did not comply with the requirements of the specification. Following revisions by Ferrick, the Work Plan was accepted by the School District project team. In preparation for the removal of the PCB transformer from substation 2, C.A.D. removed all switch gear and other electrical components except overhead wire from the substation prior to initiating decommissioning activities.

On July 13, 2012, KEM observed the decommissioning and removal of the PCB transformer from substation #2. Decommissioning activities included transferring the dielectric fluid into 55-gallon drums and removing the fluid and transformer carcass from the substation. The PCB oil was drained from the transformer using a pneumatic diaphragm pump instead of a vacuum truck as described in the Work Plan.

The following activities were completed during the transformer decommissioning:

- Stains on the substation floor, in the adjacent light well and work area outside the building were identified and marked as existing before the Work was initiated.
- Floor drains in the substation and light well outside the substation were plugged, covered with oil-absorbent spill pads and/or surrounded by spill booms.
- Plastic sheeting was used to cover the substation floor around the transformer and the drum staging area in the adjacent light well.

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- Seven DOT-approved 55-gallon steel drums were staged on plastic in the light well. One drum was staged inside the substation for waste.
- A pneumatic diaphragm pump and hose sections were placed on the plastic sheeting between the transformer and drums in the light well. All connections were made using cam and groove couplings. Spill pads were placed beneath the pump and each hose connection.
- A threaded vent plug was removed from the top of the transformer.
- A coupling adapter was installed on the gate valve transformer drain. Spill pads were placed below the adapter and the drain hose was attached with a cam and groove coupling. A ball valve nozzle was installed on the discharge end of the hose.
- Compressed air was supplied to the pump. One worker operated the gate valve on the transformer drain while a second worker used the discharge nozzle to fill the drums.
- The oil flow was halted when each drum was approximately 90% full. A spill pad was used to catch any drips from the nozzle while changing drums.
- The spill pads beneath the transformer drain, pump and hose connections were continuously monitored for leaks during the PCB oil transfer process.
- Once the transformer was drained, the gate valve was closed, the hose was disconnected and placed into a 5-gallon container of diesel fuel. The diesel fuel was used to flush the pump and hose assembly before being discharged into a 55-gallon drum. A total of seven drums containing dielectric PCB oil and diesel fuel were generated.
- As the drums were filled, the bung holes of each drum were sealed with threaded plugs.
- Spill pads were used to contain any drips as the hose sections were disconnected and removed from the pump. Caps were used to seal the pump openings. The groove

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end of each hose section was inserted into the cam end and locked.

- The drums of oil were lifted out of the light well using a forklift equipped with chains and a drum clamp. Once all drums were removed from the light well, the fork lift was used to place them on a flatbed trailer. The trailer was equipped with a welded steel pan that provided secondary containment.
- The expansion chamber was removed from the top of the transformer carcass to accommodate the door opening into the light well.
- The plastic sheeting and spill pads were collected and placed into the waste drum.
- The carcass was raised with jacks and tripod casters were placed under each corner.
- The carcass was moved to the doorway leading into the light well. The forklift and chains was used to lift the carcass over the threshold and into the light well. The carcass was hoisted out of the light well and placed onto the flatbed trailer. The expansion chamber was removed from the substation and placed on the flatbed trailer.
- The drums and carcass were labeled as PCB and manifested under a uniform hazardous waste manifest for transport to a Clean Harbors facility in Twinsburg, Ohio. According to the Ferrick Waste Management Plan, the dielectric fluid will be transported to a Clean Harbor incinerator in Deer Park Texas and the carcass will be cleaned and dismantled at a Clean Harbor facility in Coffeyville, Kansas.
- The transformer carcass and seven drums of PCB oil were transported from the site on July 13, 2012. A copy of the transportation manifest showing acceptance at the Twinsburg facility is attached. According to Clean Harbors personnel, the oil and carcass will be manifested as Clean Harbors waste when shipped to their other facilities. The School District will receive certificates of destruction once the material has been processed.

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- The substation was broom swept and all collected debris placed into the PCB waste drum. The substation, light well and outside work areas were surveyed to confirm no new stains were present. Drain protections were removed. The waste drum was labeled and left on site until the removal of the other transformer is complete.

The removal of the transformer from substation 2 did not damage the encapuslated area and no evidence of additional staining was observed on the floor slab beneath the transformer. The approved renovation plan includes the installation of a 4-inch concrete pad on top of the majority of the existing floor slab. No drilling, coring or abrading of the encapsulated area was permitted during the installation of the new floor slab. Because PCB-impacted concrete remains at the school, the requirements of the Consent Decree regarding to the maintenance and documentation of the encapsulated area will remain in effect until such time as the affected area is removed as described in the Consent Decree and Cleanup Plan.

KEM appreciate the opportunity to be of continued service to the School District of Philadelphia. Please contact me if you have any questions or comments.

Regards
KEATING ENVIRONMENTAL MANAGEMENT, INC.

J. Stuart Wiswall, PG, LEED-AP
Senior Project Manager

Attachments: Hazardous Waste Manifest

Cc: Mr. Jerry Junod
File 5385

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FT4472506

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: 40 CFR Part 761
2. Page 1 of: 2
3. Emergency Response Phone: (800) 483-3718
4. Manifest Tracking Number: 002921894 FLE

GENERATOR

5. Generator's Name and Mailing Address: School District of Philadelphia, 440 North Broad Street, Philadelphia, PA 19130
Generator's Site Address (if different than mailing address): George Washington High School, 10175 Bustleton Avenue, Philadelphia, Pa 19116
Generator's Phone: 215-651-6794

6. Transporter 1 Company Name: Clean Harbors Environmental Services Inc
U.S. EPA ID Number: MAD039322250

7. Transporter 2 Company Name: CLEAN HARBORS ENVIRONMENTAL SERVICES, INC
U.S. EPA ID Number: MAD039322250

8. Designated Facility Name and Site Address: CLEAN HARBORS APM, LLC, 1672 E. HIGHLAND ROAD, TWINSBURG, OH 44087
Facility's Phone: (330) 425-3825
U.S. EPA ID Number: OHD986975399

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN2315, Polychlorinated Biphenyls, 9, PG III	002	CM	4136	K	
X	2. RQ, UN2315, Polychlorinated Biphenyls, 9, PG III	001	DM	2127	K	
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. PPMCHTRH
2. PPMDH3
MAIL GENERATOR COPY TO: Keating Environmental Management INC, 835 Springdale Drive Suite 200, Exton, Pa 19341
Date Removed From Service for Disposal 7-13-12
TRL# 7262
ER6 # 171

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: J STUART WISWALL / AGENT DISTRICT OF PHILADELPHIA FOR SCHOOL
Signature: J Stuart Wiswall
Month: 7 Day: 13 Year: 12

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Alex Calder
Signature:
Month: 7 Day: 13 Year: 12
Transporter 2 Printed/Typed Name: TYRONE CLEMONS
Signature:
Month: 7 Day: 17 Year: 12

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Amanda Delewski
Signature:
Month: 07 Day: 30 Year: 12

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

FT4472506 Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: 40CFRPART761

22. Page 2 of 2

23. Manifest Tracking Number: 102921894FLE

24. Generator's Name

School District of Philadelphia
440 North Broad Street
Philadelphia, PA 19130

Site: George Washington High School
10175 Bustleton Avenue
Philadelphia, PA 19116

25. Transporter _____ Company Name: **Clean Harbors Environmental, Inc.**

U.S. EPA ID Number: MAD039322250

26. Transporter _____ Company Name

U.S. EPA ID Number

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes

TRANSPORTATION ONLY

32. Special Handling Instructions and Additional Information

TRL# 7262

TRANSPORTER

33. Transporter _____ Acknowledgment of Receipt of Materials
Printed/Typed Name: John L. Minosion
Signature: John L. Minosion
Month: 07 Day: 26 Year: 17

34. Transporter _____ Acknowledgment of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

EPA Form 8700-22A (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

PCB CONTINUATION SHEET

MANIFEST # 002921894 **SHIPMENT DATE:** 7-13-12

CUSTOMER NAME: George Washington High School

MANIFEST LINE	CONTAINER ID #	PCB CODE	WASTE DESCRIPTION	OUT OF SERVICE DATE	WEIGHT OF WASTE IN KILOGRAMS
9A1	S/N 3338913 CM-8		Transformer	7-13-12	
9A1	CM9		Transformer Part	7-13-12	
9A2	DM1		7500 0.2		
	DM2				
	DM3				
	DM4				
	DM5				
	DM6				
	DM7				